IMAGINE

This strategy includes visualizing a scene depicted in the writing, creating a graphic or three-dimensional representation of an abstract principle, imagining how a substance might feel, smell, or taste, etc.

Notes

Strategy-at-a-Glance

What's Involved? What's the Strategy Really About?

Readers use sensory activities such as picturing scenes, drawing charts and diagrams, imagining sounds, etc., to understand text. Asking readers to bring their imaginations to bear on their reading:

- Lets readers use a variety of intelligences to enhance comprehension;
- Works as well in an AP physics classroom as in a 4th grade reading class;
- Helps students better use visual aids contained in texts and articles;
- Adds a "fun" dimension to the classroom through the creation of student drawings, collages, etc.;
- Supports other closely related strategies: **Make Connections, Explore Inferences.**

What's Essential to Teaching and Supporting this Strategy?

- Regularly using Think-Alouds to model not only the use of the imagination but also how this improves reading comprehension;
- Providing plenty of opportunities for students to bring their imaginations to bear on their reading, while understanding that some readers may never rely heavily on this strategy;
- Using prereading activities to set the stage for active reading, such as imagining what a character in a novel might look like or what the graphics in a nonfiction chapter signify about its content;
- Helping students recognize ways they already use their imaginations while they read – such as images they visualize, charts they create, etc. – and showing them how to intentionally call upon these activities to support their understanding;
- Asking students to write imaginative responses to text.

Resources Included:

Supplementing Word-Based Assessments – A tool that allows teachers to assess comprehension through imagination-based student work.

Single-Sentence Imaging – A step-by-step tool to help students visualize images.

Underlining Image Words – A simple excercise to reinforce imaging.

Notes

The Imagination: A Window on Comprehension

Strategic readers use their imaginations in many ways to enhance comprehension. Reading comprehension guidelines often suggest that students visualize what they read. As one teacher puts it, "To fully comprehend what they're reading, students need to be able to 'make movies' in their heads." But visualizing is only one of many ways readers use their imaginations to enrich reading comprehension, so we include other sensory activities under this heading.

Learning theorists suggest several ways to think about how the imagination helps with comprehension. **From the standpoint of Multiple Intelligences, the imagination enlists several of the less overtly cognitive intelligences: the spatial, the musical, and the bodily-kinesthetic. From the Learning Styles standpoint, visual learners profit from tools that enhance the use of the imagination.**

Then there's the more basic question about the power of the imagination as a learning tool for all students in any situation. Note the dramatically diminished emphasis on imagination as a learning tool as students progress through the grades. The typical first-grade classroom features children's paintings on the walls and bookshelves bulging with tales of folklore and fantasy. Lessons often feature games, songs and mini-dramas. In the typical high school classroom, posters are subject-specific, the variety of books is small, and any play in the pedagogy ranges from limited to non-existent.

The imagination plays a significant role in learning throughout life, but it rarely has direct bearing on the material for which students will be held accountable, so it is often overlooked in content area instruction. This is a major oversight.

Who Makes Pictures, Who Hears Sounds?

Many students do not regularly use their imaginations to enhance their comprehension; for them, reading entails making the sounds the letters dictate, and hoping that the accumulated sounds will make sense. Others naturally bring their imagination to bear on what they read, but say they do this only when they "read for pleasure." Students who struggle to understand abstract texts rarely find such reading a "pleasure," so we can assume that many students need to be reminded – constantly – of the helpful role imagination can play in their reading of content area texts.

Two tasks confront teachers: first, to help students create images, sounds, and graphic representations of what they read; second, to show them how to use these products of their imagination to improve their reading comprehension.

Notes

II – Helping Students with the Strategy

Activating – or Reactivating – the Imagination I: Fiction

Fiction, poetry and drama most naturally activate the reader's imagination. Students of all ages can be asked to imagine the sights, sounds and smells in a piece of descriptive writing. We can also ask them to illustrate these scenes. Once they've had some practice, they can illustrate a character or a setting based on information from different sections of the reading, create family trees, or even draw a map of the town, whether that's the town in McCloskey's **Whistle** or Dickens' **Tale of Two Cities.**

Conversations among students that begin "That's not how I pictured it," often provide the starting point for meaningful discussions of the text.

Activating – or Reactivating – the Imagination II: Nonfiction

Many upper grades teachers are leery of imagination-enhancing activities that take time away from content instruction. But helping students bring their imaginations to bear on complex reading doesn't have to be time-consuming or complicated. A good place to start is by using the imagination-centered tools that are already available. Almost all textbooks – as well as student-centered and general-audience magazines – offer visual representations of information presented in the text. From maps of Civil War battle maneuvers to diagrams of cell division to illustrations of slope, most textbooks offer a wide range of visual supplements that enhance reading comprehension.

☛ Reflecting on the visual representations of osmosis in his textbook, a middle school science teacher realized that one of the diagrams summarized all the information contained in five pages of text. The textbook editor had, in other words, "visualized" the entire subchapter for the students! The teacher asked the students to "read" the picture before reading the subchapter. Then he taught the students to look for comparable "visualizations" in the rest of the book.

Having laid this foundation, the teacher asked the students to create their own "visualizations" of sections of the text that they found confusing. He later realized he might also have asked them to turn diagrams into paragraphs, allowing visually oriented students to work from a visual to the verbal!

It's important to create opportunities for students to draw pictures, create graphic organizers, and build physical representations of abstract ideas, based on text. But it's equally important to teach students to take full advantage of the graphics that are already there.

Making the Connection to Comprehension

Notes

The connection between imagining and actually understanding the reading is not automatic. Just as students can make lots of connections between what they read and their daily lives without improving their understanding, we can get students to imagine up a storm without affecting their comprehension one iota.

How does imagining support comprehension? A student who does not imagine Frederick Douglass' experiences while reading his **Life and Times** certainly misses the power of the narrative. But is it enough simply to visualize the scenes, hear the sounds, and even feel the pain?

What we know about how people learn – including how they learn from text – tells us that such visualizing is a good beginning. But there's a second step. For the act of imagining Douglass' life to enhance reading comprehension, the reader must reflect on the act of imagining he or she has engaged in, and determine what it has done to improve comprehension. In other words, without bringing metacognition to bear on the experience, the reader may see, feel and smell, but not actually understand the reading any better. **The understanding comes from translating the sensory into cognitive and linguistic modes – and these must be explicit, intentional and systematic.**

A range of questions can help students extend their understanding, both of what they've read and of how they've processed it:

- "You've described what you saw as you visualized the scene Douglass depicted. What do you know about his life that you didn't know before you visualized?"
- "You've drawn a diagram that illustrates what the text said about the circulatory system. What do you know about the law that you didn't know before?"
- "You've imagined how Tacky the Penguin's voice would have sounded when he sang that song to the robbers. What does that help you understand about Tacky?"

Effective use of the imagination should be modeled repeatedly so it becomes second nature. Equally crucial is using questioning and discussion to evoke student reflection on how the imagination enhances reading comprehension!

III – Tools for Strategy Instruction

The following assessment activity was developed for high school English students in recognition of the fact that most assessment relies on students' verbal skills. This alternate assessment, which can be used with both fiction and nonfiction text, calls upon students to visually represent their understanding of text.

The Imagination: Supplementing Word-Based Assessments

Goal: To provide students with a non-linguistic way of representing their understanding of reading.

Assessment activities focusing on the Imagination can be used in two ways:

1. **as formal assessment tools,** which will be discussed below,
2. as **informal assessment tools**, as used by Maggie Eaton, U-32 High School English teacher, that give her a general sense of each student's understanding. **She asks students to have some visual fun with the reading.**

☛ In such an **informal assessment,** the teacher might ask students to draw a scene from Natalie Babbitt's **Tuck Everlasting** and share with the class why they chose that scene. Period. Or ask students, in pairs, to mime a scene from a novel or poem or to show, without words, a concept or procedure from their history, science, or math text.

For more formal, graded assessments, it is important to develop a scoring rubric with clear criteria to help students focus their work. Otherwise, students may feel adrift.

☛ For example, if students are to be graded on their drawing of a scene from **Tuck Everlasting**, they will need to know if the teacher is looking for:

1. a representation of the site of the magic spring,
2. a representation of the feelings of members of the Tuck family about their situation,
3. a representation of the student's reactions to the possibility of living forever. And in each case, the rubric will have to explain what constitutes an excellent, good, fair and poor representation.

A generic rubric might serve when the choice of topic has been left to the students.

This might list:

1. "Clarity of the point that the representation is making,"
2. "Effectiveness of the medium chosen to represent the point,"
3. "Indications that the student understands the central themes of the book," etc.

There are a variety of ways to conduct such assessments:

1. **In response to fiction or expository text have students visually express a scene, moment, or highlight of text – in a painting, poster, drawing, or graphic organizer.**
   This may take many forms, including graphing a plotline, charting the primary conflicts in a novel, graphically representing the relationships between historical events, etc.
2. **Ask teams of several students to decide what is the MOST important idea, theme, event, or information in the text and express this in poster/mixed media form, or to offer a dramatic or musical representation.**
3. **Ask students to keep response journals, periodically illustrating responses to their reading.**
   These can range from drawing a paramecium in a biology class to creating and delivering a monologue that expresses a character, conflict, setting, etc. from a novel or poem.
4. **If technology is available, PowerPoint is a wonderful tool for students to summarize and visually express the key pivotal/thematic moments in the fiction or nonfiction text.**

Single-Sentence Imaging

Goal: The student will be able to visualize and verbalize a sentence.

Nanci Bell (1991) has created a carefully sequenced series of activities for students who have difficulty visualizing as they read, beginning with words and extending to whole-paragraph visualizing. What follows is an intermediate step, to be used just before working on entire paragraphs with students who have become adept at visualizing single words.

- The teacher uses a noun the student knows well as the centerpiece of a sentence.

  The clown stood up.

- The student images individual words within the sentence, then creates and articulates a complete picture of what the sentence describes.

  I see a clown and he was sitting down but now he's on his feet.

- The teacher asks the student to elaborate on the picture.

  The clown has a big red nose and a funny hat and some of those big gloves like hands.

- The teacher asks the student to elaborate, using fanciful images to create a silly sentence.

  The clown is going to slip on the banana peel that the monkey just dropped in front of him.

Underlining Image Words

The student underlines the image words while reading the sentence orally.

In the sentence above, "clown" and "stood up" would be underlined. In the sentence, "The cat is in the tree," both nouns ("cat," "tree") should be underlined, and so should "in," which shows the relationship between the cat and the tree.

Note: Many students, having learned to visualize individual words, can move quickly from single sentence to full paragraph visualization and articulation. **Being able to visualize such a larger picture is the goal of the work.**

MAKE CONNECTIONS

This strategy includes drawing upon prior knowledge to make text-to-self, text-to-text and text-to-world connections in order to clarify and extend understanding of the text.

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Strategy-at-a-Glance

What's Involved? What's the Strategy Really About?

Reading makes sense only when the reader can connect the new material with what's already known. Most readers make these connections naturally; it's our job to help students broaden the connections they make and see how the connections help them understand. Working with students' connections helps:

- Students understand that what they already know helps them learn;
- Teachers and students have meaningful conversations about text even before the students begin reading;
- Students see knowledge as cumulative and integrated, as teachers ask them to talk about things they learned in other classes, as well as earlier in the same class;
- Students create the prior knowledge necessary for success in subsequent classes;
- Support other closely related strategies: **Imagine, Explore Inferences.**

What's Essential to Teach and Support this Strategy?

- Modeling the activity through Think-Alouds;
- Using the strategy with nonfiction text as well as fiction;
- Encouraging students to make all sorts of connections, and not rely only on text-to-self;
- Honoring connections students make, rather than waiting for "good" ones;
- Using graphic organizers such as concept maps and Venn diagrams to help students represent the relationships between the text and their connections;
- Suggesting that students having difficulty comprehending a text try to think of a connection;
- Using follow-up questions so students think about how the connection has influenced their comprehension;
- Encouraging students to learn from others' connections, as well as from their own.

Resources Included:

Making Connections – This chart helps students and teachers keep track of the connections they make and how these connections affect their understanding of text.

Connecting, Reflecting, Predicting – A tool designed to help students become more intentional in their uses of the **Make Connections** strategy.

Making Meaning

To make meaning, we connect new information with familiar information, or, as the reading comprehension literature phrases it, with prior knowledge. When readers make connections between what they read and what they already know, they build an understanding of the new material.

The connections we make to reading – or to any new information – are usually divided into three types: Text-to-self ("t-s"), text-to-text ("t-t"), and text-to-world ("t-w"). These three often overlap. For many younger students the distinction between the "self" and the "world" is not particularly clear. Even for older students, this distinction is sometimes muddy. One may have some prior knowledge about a topic from a book, and other prior knowledge from a personal experience.

Enforcing a strict line between one form of connection and another is almost as impossible as it is foolhardy. While students need to understand what is meant by each type of connection, the purpose of teaching these distinctions is to give students tools to enhance comprehension, not to nitpick over differences among types of connection.

Personalizing Information

The act of connecting unfamiliar information with the familiar is natural: witness toddlers who regularly interrupt stories about dogs by talking about their own dogs, or adults who twist your personal story into their personal story. Our job is to help students take advantage of this natural tendency! Sometimes this entails two contradictory emphases. **We need to encourage students to actively, intentionally and systematically make connections between what they're reading and what they already know. But we also need to rein in readers so they don't get so embroiled in connections that they forget the reason for making connections – to draw meaning from text.**

Let's take the second problem first.

> Teachers experienced in teaching this reading strategy tell tales of the pitfall of the "wild tangent." Suddenly the class is no longer discussing **Two Bad Ants** or the second law of thermodynamics; suddenly the conversation has veered into discussions of pest infestations or what really happens in those automotive crash tests. The students have indeed made connections. But the connections have overshadowed the intended content, and the teacher faces the dilemma of whether to pursue an irrelevant topic that has engaged the students or to bring the conversation back to the day's lesson.

What's the Connection For?

This dilemma highlights the need for systematic and intentional instruction in the uses of this strategy.

☛ A group of sixth graders made this abundantly clear to a reading consultant. Experienced in making connections, the students frequently included "t-s," "t-w," and "t-t" entries in their reading journals and discussed the connections they made. But the consultant doubted their understanding of the function of the

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strategy. So he read them a picture book, asking that they **jot down** a connection they made as he read. He read for a while, then paused so they could share their connections. Then he began to read again, asking that they again note a connection. At the next pause, he asked that they write something additional: How the connection helped them understand what was being read. The students were stumped. Only one or two could articulate the relationship between connection and comprehension, and even these needed coaxing. For the rest, making a connection was totally dissociated from the act of comprehension.

It is not enough to enable students to make and share connections. They must also explore exactly what effect making the connection has had on their comprehension. Sometimes it will make no difference – sometimes it will make a world of difference. The connections we want students to make are those that help them comprehend, and they can do this only when they have had practice examining how this strategy affects their comprehension.

Prior Knowledge Deficits

Although primary school texts enable most readers to make personal connections, lack of prior knowledge can become a roadblock in higher grades. E. D. Hirsch (2003) attributes the "fourth grade slump" in reading – and subsequent reading-skills decline for many students – in part to a lack of "domain knowledge," of subject-specific knowledge that enables the reader to infer relationships. Readers without such knowledge, Hirsch argues, may be able to decode the text, but cannot comprehend it.

Hirsch concludes that "the ideal language program is thus a knowledge program… In the classroom, reading comprehension and vocabulary are best served by spending extended time on reading and listening to texts on the same topic and discussing the facts in them." (22) Immersion is the key to comprehension, according to Hirsch. **Students cannot learn without background knowledge.**

II – Helping Students with the Strategy

Pre-reading

Prior knowledge can be effectively engaged through a variety of pre-reading activities. Whether through formal tools such as KWLs or through open-ended brainstorming about what students already know.

But there's a big difference between pre-reading that activates prior knowledge – activities that prepare the reader to receive the new information – and a more traditional approach in which the teacher reviews the main ideas, calls attention to new vocabulary, and suggests questions students might think about as they read. In most such cases, the only prior knowledge the teacher is activating is his or her own.

Prompting Their Knowledge

Genuinely activating prior knowledge requires an open-ended approach, where readers make connections with their own experiences – in life, in text, in movies, etc. – before they read.

> At its most basic, such pre-reading begins by providing the students with an introduction to the material: asking what they already know about the subject or asking them to skim the chapter then discuss some of their impressions, moving private prior knowledge into the public sphere. Such activities enable students to build their reserve of connections by hearing others share their prior knowledge.

This strategy calls to mind excessively personal discussions of movies students have seen, the time they got lost on a camping trip, and similar "bird walks." Providing students opportunities to roam so far and wide may be less than fruitful, and there are other, simpler ways the strategy can be used to prepare young readers for what's to come.

The simplest way is to spend time reviewing what's been read recently, as recently as the previous week.

> In making such text to text connections, the students should be asked to actually open the pages of that previous reading, noting central facts and concepts as they re-skim the text and raising questions about anything they still don't understand. From this focus on the previous text, they can then make predictions about what may come next.

Text-to-Text at Any Grade

- A first grade teacher, after teaching her students to make connections and providing them with opportunities to practice the strategy during read-alouds, developed a more focused text-to-text activity for her students. First, she read them Margaret Hodges' **The True Tale of Johnny Appleseed**, providing plenty of opportunity to talk about their connections, in small groups and in the full group – most connections were text-to-self. Then, she read them Kellogg's **Johnny Appleseed: A Tall Tale**. This time, the connections they made were almost entirely text-to-text. While the students had enjoyed the first book, their engagement in the second was much higher. Bringing prior text knowledge to the story gave them special focus, fuel for fresh conversation. And better comprehension.
- Comparing two different textbooks' presentations on immigration had the same effect on a US history teacher's sophomores. The first reading served as "prior knowledge" for the second, which was more comprehensible because the students had something for comparison.

Becoming Intentional

In both these cases the teachers took time to help students reflect on the relationship between connecting and comprehending. Calling explicit attention to how one mental process influences another helps readers become intentional in their use of reading comprehension strategies.

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III – Tools for Strategy Instruction

Many teachers ask students to focus on connections as they annotate and take notes on texts, either by writing directly on photocopied pages or by using sticky notes.

- At its most basic, this entails jotting T-S, T-T, or T-W at appropriate places on the page.
- Students can be asked to add the specific connection they have made next to the code, such as "T-T, reminds me of Romeo and Juliet," or "T-W, like the war in Iraq."
- Students can be asked to add how each connection helped them understand, such as "T-T, reminds me of Romeo and Juliet; reminded me that groups of guys have always fought with other groups of guys," or "T-W, like the war in Iraq; understood how chaotic things can be."

The **Making Connections Worksheet** on the next page can be used in a variety of settings, and modified as required.

Connecting, Reflecting, Predicting encourages intentional use of the **Make Connections** strategy.

Name: _____ Date: _____

Making Connections

Goal: To encourage students to become intentional in making all sorts of connections.

Directions: As you read the assigned text explain any connections you have made in each of the three categories below. Include page number and paragraph number for each connection.

Text to Self Connecting your own life to text. Think about past experiences and prior knowledge.	Citation from text: This reminds me of…
Text to Text Connecting one piece of text to another. Could be a book, an article, a movie, a script or song, or anything that is written down. Can also include a connection from one section of text to another.	Citation from text: This reminds me of…
Text to World Connecting something read in the text to broader ideas, (issues, patterns, concepts.	Citation from text: This reminds me of…

Adapted from **Strategies that Work** by Judy Allen, Essex Middle School, for VSRI, 2004.

Connecting, Reflecting, Predicting

Goal: To provide a formal way for students to analyze how the Make Connections strategy supports their learning.

Adapted from a reflection tool developed by Essex Middle School French teacher Betsy Conlon, "Connecting, Reflecting, Predicting" enables students to pay attention to what and how they're learning, as well as to think of ways the new learning may help with subsequent learning.

At each step of the activity, students should be given time to complete the appropriate places on the form independently. They should then share their findings, either first with a partner then with the full group, or just with the full group. Students' comments should be recorded on the board.

Please note that this tool provides an interesting way to "cover" the material – the students' reflections on what was hard and easy and on what they learned can serve as the actual teaching vehicle.
Thus, the instructional part of the class entails students sharing, elaborating on, and correcting each other's assertions. This works best when students make references to specific pages, allowing them to prove their points and emphasizing the importance of text, while other students follow along in the reading.

1. **Prereading – Students respond to the "Connecting" prompt when the new material is introduced.**
   The teacher should give them a few minutes to look over the chapter, book, poem, etc., and list as many things as possible they know that might help them understand, noting whether the connections are t-s, t-t, or t-w.

2. **During Reading – Responding to the "Reflecting" prompts, students note what's hard and what's easy as they go along, as well as listing the main points they're learning as they read.**
   They should also note how what they already know helps them understand – this is the hardest part, and requires practice.

3. **After Reading – Students predict how what they've learned may help them learn other things, either in this class or in other subjects.**

This tool, like nearly all the others, is most effective when students have used it enough times for its use to be relatively natural. **The ultimate goal is to help students reflect on their learning as they go along, no longer needing a tool like this. This is accomplished through lots of guided practice and discussion.** Many students will especially require practice using the last question, "How what I learned may help me learn other things." As the tool is used again, students will find themselves calling upon knowledge gained from earlier lessons that will help them become more adept at thinking about knowledge along these lines.

Connecting, Reflecting, Predicting

Connecting

What I already know that may help me understand the reading:

1.

2.

3.

Reflecting

1. What's hard about the reading (note page numbers):

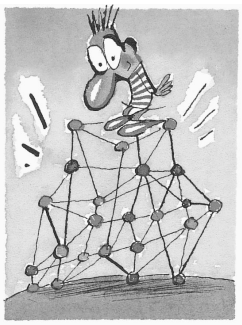
2. What's easy about the reading (note page numbers):

3. What I learned from the reading:

4. How my prior knowledge helped me understand (be as specific as possible):

Predicting

How what I learned from the reading might help me learn other things:



ANALYZE STRUCTURE

This strategy includes using transition words, the table of contents, subheads, bold print, and text patterns to help discriminate among fiction, nonfiction, comparative, explanatory and other text structures, as well as paying attention to other technical aspects of the author's craft.

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Strategy-at-a-Glance

What's Involved? What's the Strategy Really About?

Teachers must understand how their readings work so they can constantly help students see the relationship between what is being presented in a reading and how it is presented. The goal is to have students automatically think about the between presentation and content in everything they read.

- It's hard for knowledgeable adults to see text through novice readers' eyes, but this is essential for supporting this strategy;
- The way information is presented differs reading by reading, subject area by subject area, grade level by grade level; students will grasp the subtleties of these differences only through explicit, on-going instruction;
- Closely related strategies: **Reread and Adjust, Ask Questions.**

What's Essential in Teaching and Supporting this Strategy?

- Introducing students to concepts and procedures at the very beginning of the school year;
- Recognizing that this year's science book will be organized differently from last year's, and that something as complex as this requires continuous reinforcement;
- Continuing to use text-structure analysis as a vehicle for content instruction throughout the school year;
- Remembering that structure applies to everything from single paragraphs to individual pages to full chapters;
- Comparing selections from different sources that address the same information, as well as analyzing the structure of a variety of types of sources;
- Encouraging colleagues in other disciplines to engage in this work, and ensuring that students have opportunities to investigate both fiction and nonfiction structures.

Resources Included:

Understanding the Relationship Between Graphics and Text – This activity helps students see the functions different graphic elements serve.

Nonfiction Text Structures – This series of graphic organizers gives students ways to represent a variety of nonfiction textual organizations.

Narrative Story Frame – This graphic organizer enables students to represent the main events in fiction.

Text Features of Resource Books – This chart shows students what to look for in reference books.

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I – An Overview of the Strategy

More Attention's Necessary

Experience in a wide range of classrooms beyond grade three indicates that reading comprehension can be dramatically enhanced if students know the structure of what they're reading, from picture books to Weekly Reader magazines to advanced science texts.

Because the literature does not pay great attention to text structure, decisions about reading materials are sometimes based primarily on the information contained, the general appropriateness of the reading level, and cost. But when we ignore the way the reading material is structured, we cannot consider ways to help students understand how structure may help or hinder student comprehension.

In **Infotext** (1993), Karen Feathers recommends attending to several features of text structure:

> **Organization** encompasses the organization of chapters, the presence of aids such as an index, glossary and table of contents, and the relationship between questions and the information in and organization of chapters.
>
> **Reinforcement** refers to the presence of opportunities for students to practice using new concepts – does the text include summaries, aids such as maps and graphs, supplementary activities designed to accommodate a broad range of reading levels, and questions that require students to recall details, make inferences and think creatively (45)!

Looking Closely at Text

☛ **When a middle school science/social studies teacher spent a few hours carefully reviewing the basic organizational principles of her science textbook, she was impressed by the complexity of the text's organization.** This allowed her to consider what her students would have to know in order to make the best use of the text – a lot more, she discovered, than how to use the glossary and where to find the answers to chapter questions.

So she resolved to do more than the traditional first-day-of-school cursory glance at the table of contents, index and glossary. **Her students spent several days**

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intensively examining aspects of the text such as the role of graphics, how pre-reading topic sentences enhances comprehension, where the main points of the subchapters typically reside, etc. The students were as impressed by the help such information provided them as the teacher had been by the text's complexity. Variations on "I didn't know this graph explained what the text was telling me about!" rang out in the classroom again and again.

Then she had the students engage in the same exercise with their U.S. history text, which proved equally revealing, especially when the students compared the two basic structures. But she didn't stop here. Throughout the year she regularly integrated attention to specific text features in content discussions, and advocated fervently among her colleagues for teaching students to use text structure to enhance comprehension.

☛ A math teacher in the same school was skeptical of the applicability of this technique to his discipline. But, coached by the science teacher he saw that each of his chapters had a clearly explicit thesis, that the graphics fulfilled specific functions in relation to the narrative, and that examples were always provided at specific points in the explanation.

Criteria for Analysis: Discourse Features

What criteria did the science/social studies teacher use to examine her textbooks?

☛ First, she used a readability formula to make sure the books were written at a level appropriate for eighth graders. This examination was rendered somewhat moot by the fact that science texts are notorious for their "vocabulary density" – the amount of new vocabulary they introduce.

When she compared the science textbook with the history textbook, she found less new vocabulary, but many unfamiliar people and places – which can be just as confusing. This exemplifies that information in different subject areas comes with different "discourse features." Adult readers may take these for granted; students may not.

To students, textbooks are textbooks. But different disciplines engage in dramatically different tasks – history wants to know what caused human events in the past to happen, botany wants to know how plants work, algebra seeks unknowns using formulae, literature presents pure story, leaving the reader to infer meaning from the narrative. **If such purposes aren't explicitly articulated to students, they won't see them; not seeing them, they can't use these discipline-specific purposes to focus their reading.**

Discourse features and organization may involve:

- Assumptions about the processes central to the discipline (problem-solving, proofs, analysis);
- The questions asked of information (why? how? when? for how long? with what result?);
- Methods of presentation (debate, narrative, proposition followed by proof).

Criteria for Analysis: Presentation of Information

Understanding the organization of the writing, the student can see the relationship between the parts and the whole. Questions that help clarify this organization include:

- Where does the author usually put the thesis, and is it restated?
- What are the functions of the introductory and concluding paragraphs?
- Where in the paragraph does the author typically locate topic sentences?
- Does the author frequently use devices such as rhetorical questions?
- Is it easy to distinguish between facts that serve as examples – including negative ones – and essential facts?
- If the author includes narrative, is its function merely to provide color, or is it central to the material?
- What role do graphic elements play in support of comprehension?

Criteria for Analysis: Fiction

Such basic structural questions apply to all sorts of reading material at all levels. However, the questions one asks about fiction – from Betsy Byers to Tolstoy – differ somewhat from the questions one asks about nonfiction.

Questions about character development, the importance of setting, the use of symbolism and metaphor, etc., replace those about the relationship between graphics and text, or the location of the thesis statement.

It's important to examine works of fiction for organizational issues such as the complexity of the sentence structure and the prior knowledge the author assumes.

As with nonfiction, helping students with this requires that we pay the same kind of attention to sentences and paragraphs that we use to analyze the presentation of information in nonfiction.

Picture books also come with structural issues that merit close attention. Primary grades teachers know that the relationship between the illustrations and the text can take several forms.

In some, such as Eve Rice's **Sam Who Never Forgets**, the pictures basically mirror the textual narrative.

In others, such as Lloyd Alexander's and Ezra Jack Keats' **The King's Fountain**, the illustrations dramatically elaborate on the mood hinted in the text. In books such as Jacqueline Woodson's and James Ransome's **Visiting Day**, the text and the illustrations seem to tell two parallel stories.

In wordless picture books such as Jeannie Baker's **Window**, of course, the entire narrative is up to the imagination of the "reader."

Add to this elements such as the impact of rhythm, rhyme and repetition on comprehension, and we see that there's no such thing as a text whose structure isn't directly related to its content. And therefore, there's no such thing as a situation in which a consciousness of the way the information is presented will not have bearing on the reader's ability to comprehend the material!

Notes

Notes

II – Helping Students with the Strategy

Integrating this strategy into content instruction takes practice, but pays double dividends. Combining instruction in the way topic sentences work with instruction in what the topic sentences say helps students engage with the material on two levels, the presentation and the content level.

> The presentation level gives students new ways of thinking about the content. "Why has the author put this sample problem right here?" is a very different kind of question from "Who can solve this sample problem?" which only calls upon students to execute an operation. The first question requires several actions: students must review what the text has said so far, see if they can work the sample problem, then ask themselves how the sample problem relates to the explanation in the text – in other words, the question calls for review, analysis and application.

To make the first question effective, the teacher must also ask the students how they arrived at their conclusions: what rereading the text brought to mind, what this set up for them when they looked at the example, whether this caused them to go back to the text, etc. Such articulated metacognitive activity helps readers understand the author's purpose. Recognizing this, readers can better understand the next example-text relationship they encounter.

The goal of these efforts is to create a classroom in which discussion naturally interweaves the way information is presented with examination of the information itself. A sixth-grade teacher who begins the year by laying such foundations finds her students engaging in dramatically more sophisticated conversations than students whom she did not teach to do this.

☛ Early in a conversation about an article on child labor in the developing world, for example, a student asks about the relationship between the quotations from workers and the author's thesis. This leads to an examination of the quotations, separate from the rest of the article. As a result, the students understand that the quotations do not prove the thesis so much as illustrate it, creating empathy in the reader. This leads to a discussion of what the article would have been like without the quotations, which leads to a discussion of the relationship between introductory and concluding paragraphs. The result? The students have analyzed the information by asking questions about the author's presentation.

Helping students use text structure to increase comprehension lets them join the world of those who write what we read. They can see what the authors were doing or thought they were doing as they and editors decided how to structure text. Learning the secrets of specific text structures, and provided with opportunities to apply this learning to other texts, **students gain a skill that will help them understand anything they read.**

III – Tools for Strategy Instruction

Understanding the Relationship Between Graphics and Text

Goal: To think about material from the students' point of view before it is assigned, as preparation for a lesson that helps students see how graphics support and extend text.

Textbook and magazine publishers often supplement text with graphics, including maps, pictures, sidebars, graphs and charts, etc. But does the author expect the reader to look at a chart before reading the explanation in the text, or to read the text first? Are the captions a restatement of the information contained in the main body of the text, or a supplement? Is the graphic material included only to heighten interest, or does it contain the main point?

1. Choose two pages in a textbook, article or other materials that have several different presentation components: pictures, graphs, sidebars, cartoons, etc.
2. Using the accompanying form, list the various components, noting what appears to be the intended role and relationship of each. For example:

Graphic component	**Information contained in the graphic**	**Relationship to information in text**	**Function of graphic**
Picture of Mt. Etna erupting, p. 112	Height, location and frequency of eruption.	Mt. Etna not mentioned in text; frequency of eruption in parag. 3, p. 113	Illustrates point in text, no new information Shows power of eruption.

3. After you have recorded information about all the components, consider the following questions:
   - Which of these connections can students easily make? Which are not so obvious?
   - What is the order in which the students should study the various components to best understand the information presented?
4. Transform this exercise into a lesson in which you ask students to apply the analysis of textual relationships to a lesson in the material "covered" in the reading.
   - Have students use "Understanding Textual Relationships" (next page) to analyze several pages.
   - Break them into pairs to compare their conclusions, then lead a whole-group discussion of the students' conclusions, recording their findings on an overhead or white board.
   - Discuss which of their conclusions could significantly alter their understanding of the material, and which differences of opinion would not affect understanding.
   - Have them discuss the relationship between the presentation and the meaning of information.
   - Repeat this process every two weeks, elaborating on previous conclusions.

Developed by Nick Boke, VSRI

Understanding Textual Relationships

Vermont Strategic Reading Initiative

Reading_____ Pages_____

Graphic component	Information contained in the graphic	Relationship to information in the text	Function of graphic component

Nonfiction Text Structures

Goal: To help students understand text structure through graphic organizers.

According to Barbara Moss in Exploring the Literature of Fact, several factors make nonfiction more difficult to read than fiction:

- Students have less practice reading nonfiction;
- Students may have little prior knowledge of the content;
- Vocabulary is specialized and often technical; and
- Expository text structures are more varied and complex than those of narrative writing.

To support students as they read informational text, teachers should supply direct instruction in each of these areas. Students need to know that nonfiction has different purposes than narrative text. Nonfiction does not tell a story, but informs, reports, or describes with researched information that is then logically organized.

Students first need to be taught to read structural organizational cues such as:

- Boldface headings;
- Italicized words;
- Visuals (photographs, maps, graphs, timelines, etc.).

They also need to recognize the various types of nonfiction text structure.

Recognizing these will aid basic comprehension and provide a model for writing expository pieces. Here are the five most common expository text structures:

- Sequence;
- Compare-contrast;
- Cause-effect;
- Problem-solution;
- Description.

Sequence

A sequential pattern puts facts, events, or concepts in order of occurrence. Signal words include **first, second, next, last, before, after, finally,** etc.

Graphic Organizer:

Context:

Focus

↓

Paragraphs-----Event/Fact/Concept 1

↓

Paragraphs-----Event/Fact/Concept 2

↓

Paragraphs-----Event/Fact/Concept 3

↓

Conclusion – Restatement of Focus

Aha

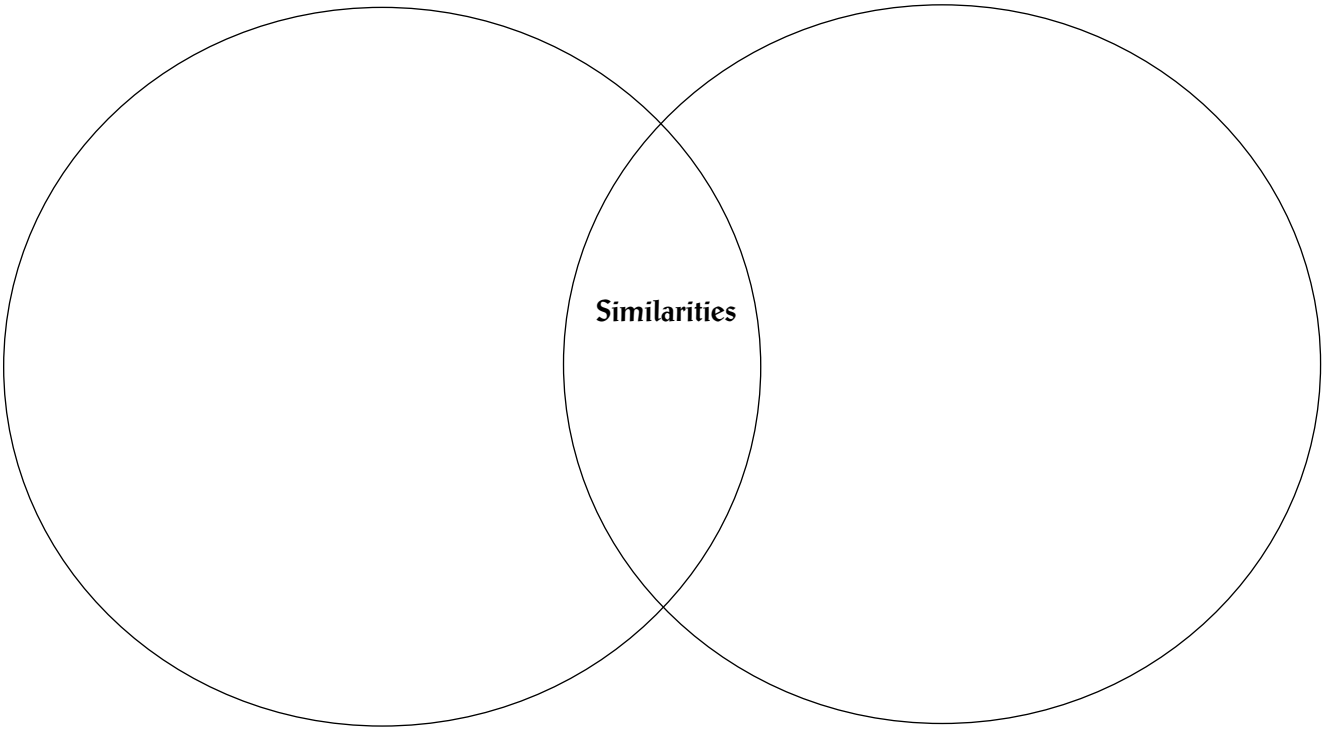
Compare-contrast

A compare-contrast pattern identifies similarities and/or differences in facts, concepts, people, etc. Signal words are **different from, same as, alike, resembles, compared to, unlike, but, yet,** etc.

Comparing 2 qualities: Graphic Organizer

Context:

Focus: _____ and _____have similarities and differences



Conclusion – Restatement of Focus

Aha

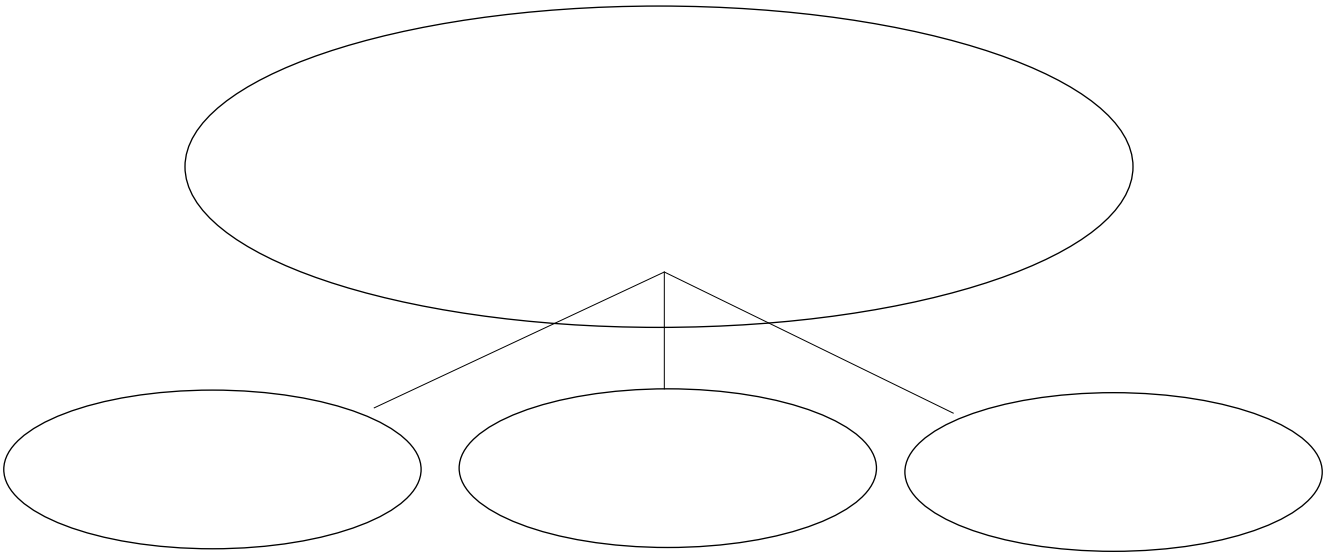
Cause-effect

A cause-effect pattern describes events and their causes, then the effects these events have. Signal words are **if, so, that, because of, as a result of, since, in order to,** etc.

Graphic Organizer:

Context:

Focus:



Conclusion – Restatement of Focus

Problem-solution

The problem-solution pattern shows the development of a problem and its solution, or explains a problem and the development of a solution. Typical signal words include **because, cause, since, as a result, and so that**.

Context:

Focus:

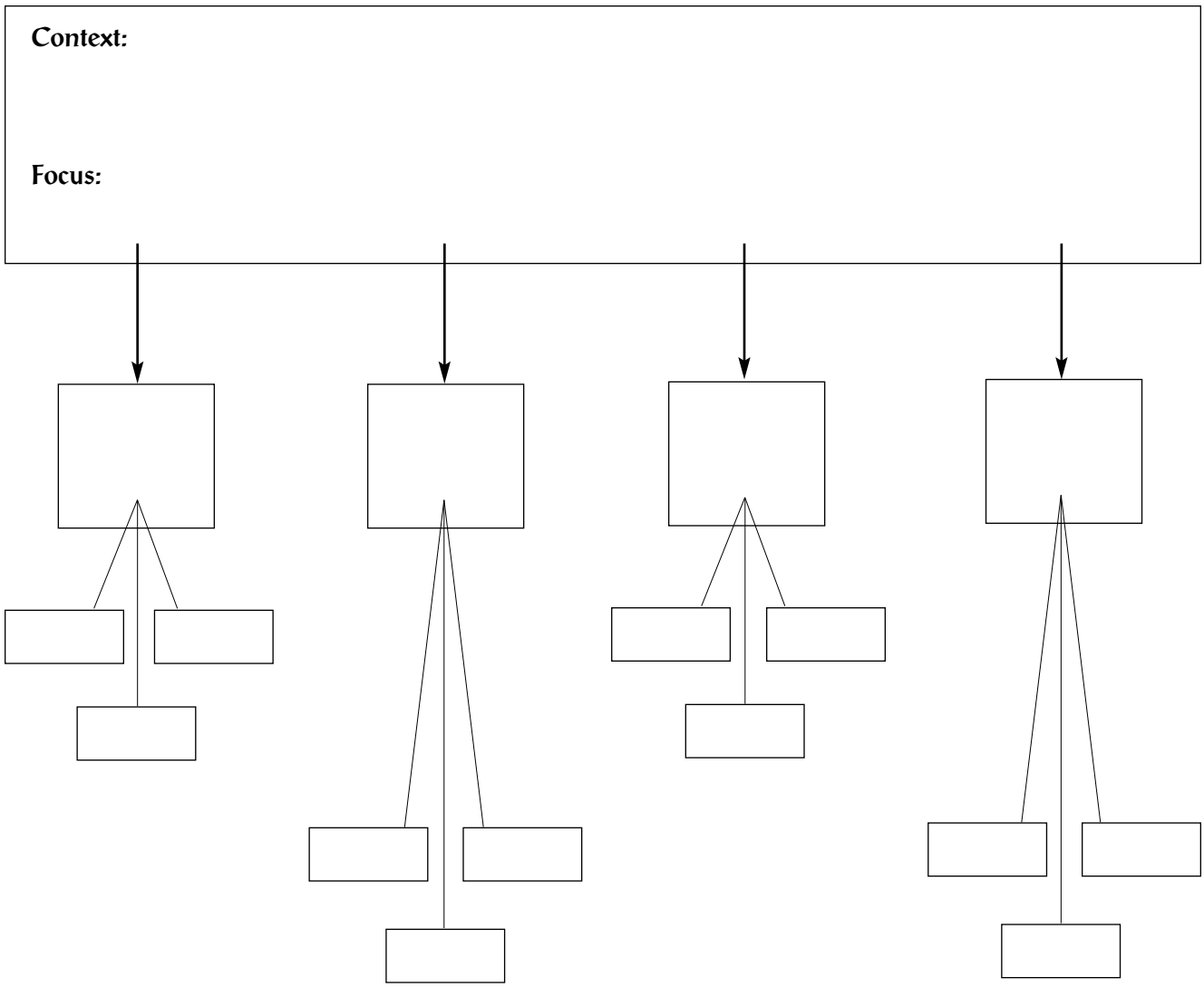
Problem	**Solution**

Conclusion – Restatement of Focus

Aha

Description

Descriptive text presents a topic and provides details that help readers understand the characteristics of a person, place, or thing. **There are no signal words.**



Conclusion – Restatement of Focus

Aha

Narrative Story Frame

Goal: To help students understand, through use of a graphic organizer, how elements in a narrative are connected.

A story frame (Fowler, 1982) can help readers understand the progression of events in traditional narrative. The activity can be used to help students see the sequence of events and cause-and-effect relationships within the story. Use of the story frame should be modeled with a short piece of fiction—with discussion that includes specific references to places in the text the students found their information, and that allows for disagreement. Next, the teacher should assign students to independently complete a story frame for a short piece of fiction. The exercise should be repeated until the students no longer require the formal activity to clarify the flow of events for themselves.

Story Frame

This story is about a character named _____ who _____.

It takes place _____.

In this story, the problem starts when:

Page Numbers:

After that:

Page Numbers:

Next:

Page Numbers:

Then:

Page Numbers:

The problem is finally solved when:

Pages Numbers:

The story ends with:

Text Features of Resource Books

Directions: Place a check in the appropriate boxes as you examine each resource. Leave a space empty if the book does not have a particular characteristic/feature.

Resource	How to Use the Book	Table of Contents	Index	Glossary	Order of Information (alphabetical, category, etc.)	Bold Headings	Fact Boxes	Graphics	Captions
Volume # (if appropriate)									
Volume # (if appropriate)									
Volume # (if appropriate)									

Developed by Kim Musante and Judy Allen, Essex Middle School.